

We claim:

1. A method for controlling a multi-cylinder internal combustion engine having electronically controlled airflow comprising:
 - measuring an internal engine condition;
 - determining if the internal engine condition indicates a limited torque output condition, the limited torque output condition not being based on current ambient temperature or pressure conditions;
 - limiting a currently available maximum engine torque if the internal engine condition indicates the limited torque output condition;
 - determining a driver demanded torque based on a current accelerator pedal position;
 - and
 - controlling the engine to deliver the driver demand torque if the internal engine condition does not indicate the limited torque output condition or to deliver a calibratable percentage of the currently available maximum torque if the internal engine condition indicates the limited torque output condition.
2. The method for controlling a multi-cylinder internal combustion engine of claim 1, wherein:
 - the internal engine condition is engine knock.
3. The method for controlling a multi-cylinder internal combustion engine of claim 2, wherein:
 - the internal engine condition is engine knock at full throttle.
4. The method for controlling a multi-cylinder internal combustion engine of claim 1, wherein:
 - the multi-cylinder internal combustion engine further includes an electric motor having a battery having a maximum voltage output; and
 - the internal engine condition is a level of voltage output from the battery at a predetermined amount below the maximum voltage output.

5. The method for controlling a multi-cylinder internal combustion engine of claim 1, wherein:
the internal engine condition is a working condition of the engine.
6. The method for controlling a multi-cylinder internal combustion engine of claim 1, wherein:
the multi-cylinder internal combustion engine further includes a turbocharger; and
the internal engine condition is a temperature of the turbocharger.
7. The method for controlling a multi-cylinder internal combustion engine of claim 1, wherein:
the internal engine condition is a percentage of coolant in the engine.
8. A method for controlling a multi-cylinder internal combustion engine having electronically controlled airflow comprising:
limiting a currently available maximum engine torque below maximum torque based on a limited torque output condition, the limited torque output condition not being based on current ambient temperature or pressure conditions;
determining a driver demanded torque based on a current throttle position; and
controlling the engine to deliver the driver demand torque if the internal engine condition does not indicate the limited torque output condition or to deliver a calibratable percentage of the currently available maximum torque if the internal engine condition indicates a limited torque output condition.
9. The method for controlling a multi-cylinder internal combustion engine of claim 8, wherein:
the internal engine condition is engine knock.
10. The method for controlling a multi-cylinder internal combustion engine of claim 9, wherein:
the internal engine condition is engine knock at full throttle.

11. The method for controlling a multi-cylinder internal combustion engine of claim 8, wherein:

the multi-cylinder internal combustion engine further includes an electric motor having a battery having a maximum voltage output; and

the internal engine condition is a level of voltage output from the battery at a predetermined amount below the maximum voltage output.

12. The method for controlling a multi-cylinder internal combustion engine of claim 8, wherein:

the internal engine condition is a working condition of the engine.

13. The method for controlling a multi-cylinder internal combustion engine of claim 8, wherein:

the multi-cylinder internal combustion engine further includes a turbocharger; and
the internal engine condition is a temperature of the turbocharger.

14. The method for controlling a multi-cylinder internal combustion engine of claim 8, wherein:

the internal engine condition is a percentage of coolant in the engine.

15. A method for controlling an engine comprising:

measuring a vehicle condition;

determining if the vehicle condition indicates a limited torque output condition whereby the torque output availability of the engine is below a maximum output availability of the engine, the limited torque output condition not being based on current ambient temperature or pressure conditions;

limiting a currently available maximum engine torque if the vehicle condition indicates the limited torque output condition;

determining a driver demanded torque based on a throttle position; and

controlling the engine to deliver the driver demand torque if the vehicle condition does not indicate the limited torque output condition or to deliver a calibratable percentage of the currently available maximum torque if the vehicle condition indicates the limited torque output condition.

16. The method for controlling the engine of claim 15, wherein:
the internal engine condition is engine knock at full throttle.
17. The method for controlling the engine of claim 15, wherein:
the multi-cylinder internal combustion engine further includes an electric motor having a battery having a maximum voltage output; and
the internal engine condition is a level of voltage output from the battery at a predetermined amount below the maximum voltage output.
18. The method for controlling the engine of claim 15, wherein:
the internal engine condition is a working condition of the engine.
19. The method for controlling the engine of claim 15, wherein:
the internal engine condition is a percentage of coolant in the engine.
20. The method for controlling the engine of claim 15, wherein:
the multi-cylinder internal combustion engine further includes a turbocharger; and
the internal engine condition is a temperature of the turbocharger.